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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,415	09/17/2003	Kevin J. Dowling	C1104-7079.20	3198
37462	7590	10/06/2004	EXAMINER	
LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE ONE MAIN STREET, ELEVENTH FLOOR CAMBRIDGE, MA 02142			PHILOGENE, HAISSA	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/664,415

Applicant(s)

DOWLING ET AL.

Examiner

Haissa Philogene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09/17/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/20/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Cochran et al., Patent No. 5,365,084.

As per claim 2, Cochran discloses in Figs. 1 and 9 a machine vision system (see also Col.1, lines 11 and 25), comprising: A) a first lighting system (B) adapted to produce light, the first lighting system comprising: i) a first light source (116) adapted to produce a first light component having a first spectrum (red LEDs); and ii) a second light source (118) adapted to produce a second light component having a second spectrum (amber LEDs), the first spectrum being different than the second spectrum (see Col.10, lines 44-47 and lines 54-56); and B) a processor (94, D) coupled to the lighting system (B) and adapted to transmit data signals or first lighting command signals to modulate the light using a shift time modulation and light pulses (see Figs. 4 and 5).

As per claims 3-6, Cochran discloses at least one of the first light source and the second light source (116, 118) comprising at least one LED; the processor (94, D) being configured to modulate at least one of the first light source (116) and the second light source (118) to change at least an intensity of the light; at least one of the first light source (116) and the second light source (118) capable of being a UV radiation source

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(see Col.19, lines 7-8); the first lighting command signals being achieved a pulse shift-time modulation of the first light source readable as a pulse displacement modulation upon receiving a displacement signal (see Col.16, lines 11-17).

As per claims 7-8, Cochran further discloses a vision system A (Fig.1) being adapted to produce a gray scale image of an object (38) illuminated by the light (see Col.8, lines 6-18).

As per claims 9-11, Cochran discloses the machine vision system further comprising a second-lighting system (26) adapted to produce a second light, wherein the first lighting system (B) is adapted to illuminate an object (38) at a first illumination angle determined between I and N and the second illumination system (26) is inherently adapted to illuminate the object (38) at a second illumination angle based on analogous control with the first lighting system (see Col.7, lines 12-19); said second lighting system (26) comprising: i) a third light source (28) inherently adapted to produce a first component of the second light having a third spectrum; and ii) a fourth light source (28) inherently adapted to produce a second component of the second light having a fourth spectrum, the third spectrum being different than the fourth spectrum, in a fashion similar to the first lighting system (see Col.7, lines 12-19); wherein the processor (D or 24, 62) is inherently coupled to the second lighting system (26) and inherently adapted to transmit second lighting command signals to modulate the second light in a fashion similar to the arrangement with the first lighting similar (see Col.7, lines 12-19).

As per claims 12-22, Cochran discloses the method of illuminating the object (38) with the machine vision system as explained above.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fan et al., Patent No. 5,300,788 ; Novini, Patent No. 5,095,204.

**Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 6:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene  
Primary Examiner  
A.U. 2821  
